

STATUS OF SUSTAINABLE TOURISM PRACTICES IN SIKKIM, INDIA: USE OF SELECT RELEVANT PARAMETERS TO ASSESS ISSUES AND CHALLENGES

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ABSTRACT

The concept 'Sustainability' though related to growth and development in any sector has never been a core issue for demand centric tourism practices in Sikkim. Mushroom growth of tourism enterprises in select tourist pockets suggests incremental increase in tourism revenues for Sikkim in one hand while overlooking its long-term impact upon the state's ecological balance. Sikkim's earthquake on 18th September, 2011 exposed the ground scenario in this tiny hilly state causing huge losses to both tourism establishments as well as people especially in the north-eastern part of Sikkim. The degradation of the tourist resources has adverse impact on the local poor, specifically the tribal people who are the most marginalized community. Sustainability of the tourist resources is key to the survival of the tribals in particular and the people of Sikkim in general. Majority of tourism sites have exceeded its capacity limits because of spurt in tourist influx resulting a threat to the sustainability of this eastern Himalayan state. The state establishments have taken few curative measures in the form promotion of satellite areas, new thrust on community-based tourism by involving locales as well as dispersal tourists from overcrowded pockets to less visited destination inside the state, but these steps are very few and far for promotion of sustainable tourism practices. The number of tourists visiting the state, in recent years, have exceeded the total population of Sikkim suggests only economic aspects of sustainability for tourism are taken care of disregarding the ecological and social sustainability.

East district of the state featuring state capital Gangtok and adjoining areas are most visited tourist destination inside the state followed by South, West and North districts. Apart from North, all the remaining districts have exceeded its capacity limits because of pressure exerted by native and floating population which is also compounded by movement of imported vehicles borrowed from adjoining state of West Bengal catering to the needs of tourists visiting the state. All these have resulted in mounting pressure upon land and masses of the state affect its sustainability.

The paper explores tourism practices of the state by using select fourteen sustainable tourism indicators and manual brought out by United Nations World Tourism Organization (UNWTO) from time to time. In fact, such indicators are used as a basis to assess tourism practices in the state and suggest ways and means of overcoming it.

KEYWORDS: Tourism, Sustainability, Sikkim, Indicator, Destination.

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INTRODUCTION

Sustainable tourism embodies the concept of “sustainable development” cropped up during the Earth Summit 1992. The concept has evolved and still evolving in the tourism academic discourse through divergent views given by researchers ‘in the last thirty years. During 1980s, the concept of sustainable tourism development was given due weight to develop strategies for alternative forms of tourism, advocated as the antithesis to mass tourism. Alternative tourism emerged primarily as a reaction to concern over the negative consequences of mass tourism. Even when ‘sustainable’ was first linked to tourism, it was recommended that for tourism development to be sustainable, it should be based upon ‘options and strategies considered preferable to mass tourism’ (Pigram, 1990). To delineate the concept further, Clark (1997) defined it as sustainable tourism, in some manner, ‘is already possession of certain types of tourism or situation, against the acknowledgement of the latter, that sustainable tourism is not an inherent characteristics of any existing form of tourism or situation, but a goal that all tourists must strive to achieve’.

UNEP/WTO (2005) report consolidated the concept ‘sustainable tourism’- meaning tourism that is based on principles of sustainable development- refers to a fundamental objective; to make all tourism more sustainable. The term should be used to refer to a condition of tourism, not a type of tourism. In this regard, WTO (2004) defined it as, “tourism that takes full account of its current and future economic, social and environmental impacts, addressing the need of visitors, the industry, the environment and the host community” and brought out a guidebook of “Indicators of Sustainable Development for Tourism Destinations” for its universal application. Since 2002, Ministry of Tourism, Government of India has undertaken “20 Years Perspective Plan for Sustainable Tourism Development” for all states’ and union territories for promoting sustainable tourism across the country and also brought out “Sustainable Tourism for India: Criteria and Indicators applicable to Accommodation Sector and Tour Operator”. States’, on their part, have also adopted similar vision in their policy documents. But most often than not, it remained confined to studies alone.

This paper examines the status of sustainable tourism development in Sikkim during 1997-2015 through application of select fourteen sustainable tourism indicators prescribed by United Nations World Tourism Organization (UNWTO). It comprised of five sections. Second section deals with brief introduction of status of tourism in Sikkim followed by analysis of tourism indicators. Last section dealt with assessment of chosen tourism indicators with respect to Sikkim along with underlining the priority areas for action.

Based on secondary data, this descriptive paper impinges on information collected from published reports/guidelines of world bodies like UNWTO, other international publications of similar kind, both print and internet, publications in journals as well as national/ state level publications relevant for the study, so the limitation of using the same would apply. The rationale of this study is therefore lying in the quest to provide a greater understanding of the concept of sustainable tourism and its application in the tourism industry in Sikkim. At any rate, the felt need for undertaking an in-depth study of the growth of tourism sector in Sikkim from the perspective of sustainable tourism has prompted us to go for the present study.

SIKKIM

Sikkim was a monarchical State and an Indian protectorate till it merged as the 22nd State of Indian Union on 16th May, 1975. The place was known mainly for monasteries, palaces and heritage sites (Rai, 1992). The State covers only 0.2 per cent of the India's total land area, but it is home to roughly one third of the nation's biodiversity (GoS, 2009); which includes hills ranging in altitudes from 200 metres to over 8000 metres, 4000 species of flowering plants, 600 species of birds, flora and fauna and some rare orchids (GoS, 2001). The State boasts of twenty-eight mountain peaks, twenty-one glaciers, 227 high altitude lakes, five hot springs and over 100 rivers and streams (GoS, 2005). Eight mountain passes bridge the gap between Sikkim and neighboring countries like Tibet, Bhutan and Nepal. The state also houses more than 300 monasteries and gumpas, chardham at Solophok, rhododendrons and a host of sightseeing spots.

Despite its tiny size, Sikkim is geographically diverse owing to its location at the Himalayan foothills. Terrain ranges from 244 at Melli to 8598 meters at Mount Kanchendzonga, the world's third highest peak straddling its North border with Nepal. Sikkim is extending approximately 114 kilometers from North to South and 64 kilometres from East to West. The State is encircled by vast stretches of Tibetan Plateau in the North, the Chumbi Valley of Tibet and the Kingdom of Bhutan to the East, Darjeeling (West Bengal) to the South and the Kingdom of Nepal to the West. The total geographical area of the State is 7096 square kilometers. Of the total geographical area, about 30 per cent has permanent snow covered by glaciers and steep rocks. The Teesta River is the main river of the State which originates as Chhombu River from glacial Khangchung Lake at the elevation of 5280 meter in the North-West corner of the State (GoS, 2002).

Tourism provides an avenue to Sikkim to generate income and employment opportunities for its people and also generate revenues for the state treasury. The specific geographical and economic landscapes of Sikkim combined with State's cultural heritage made it a natural tourist destination in the North East of India.

Given the industry's growth potential in Sikkim and also its observed ability to generate employment and income for people in such peripheral regions, the Government of Sikkim has been according high priority to tourism promotion and development. To facilitate the growth of tourism industry in the State, the first Master Plan for Tourism (1997-2011) was commissioned conducted by Tata Economic Consultancy Services. This follows "20 Years Perspective Plan for Sustainable Tourism Development in the State of Sikkim" (GoI, 2002) and also Master Plan for Development of Trekking in Sikkim (2003) conducted by Indian National Trust for Art and Cultural Heritage (INTACH). In 2010, first ever Tourism Policy was adopted by the Government of Sikkim followed by draft Ecotourism Policy in 2011. The policy statement has also accorded top priority for investment in hotels, resorts, spa, amusement parks and ropeway etc. In recent times, tourism has been declared as infrastructure industry in the state and is given top priority for its development in Sikkim (GoS, 2011). Of late, new Sikkim's State Tourism Policy 2016 overtly adopted models for promoting sustainable tourism in mountain regions.

Thanks to these policy initiatives at the both Central and State governmental levels, the tourism industry in Sikkim could register impressive growth rates. The Department of Tourism, Government of India recognized that effort and awarded

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Sikkim with the National Award for the Best Tourism Performing State in the North East for eight consecutive years during the period 1998-99 to 2005-06 (GoS, 2016). In the year 2006-07 and 2007-08, the State of Sikkim bagged the award for the Best State for Tourism related programs.

In fact, tourism industry over the years has emerged as one of the major revenues and surplus generating segments of Sikkim's economy. Of course, much of the industries true potential remains unexplored as yet. Present tourists' interest in Sikkim remain focused to primarily few tourist locations which include Gangtok, Tsomgo Lake, Nathu-la Border, Lachung, Yumthang, Pelling, Ravangla, Namchi and Yuksom. The concentration of tourists to these few tourists' locations has resulted in excessive urban congestion in the chosen centres of tourists-visits raising thereby questions relating to sustainability of tourism growth. While on the one hand, there is need to develop newer destinations and thus diversify ranges of offerings for actualizing the potential of tourism growth; on the other hand, there is an immediate need to accord due attention and weight to the sustainability aspects of tourism industry's operation. Apart from holidaying, sightseeing and pilgrimage tourism, the emerging but relatively less focused market segments like mountain tourism; sports (i.e. adventure) tourism, community-based tourism and ecotourism need to be duly promoted for balanced regional development.

INDICATORS OF SUSTAINABLE TOURISM

Since 1990s, the tourism policy and planning approved by authorities has overtly approved the objective of sustainable tourism development; although the extent to which the policy has been translated into practice remains debatable (Sharpley, 2009). WTO (1993) has published a number of policies and guides for sustainable tourism development; which includes *Sustainable Tourism Development: A Guide for Local Planners* followed by *Agenda 21 for the Travel and Tourism Industry*, published jointly with World Travel and Tourism Council (WTTC, 1996). The WTTC also sponsors the 'Tourism for Tomorrow Awards' which recognizes the best practice in 'responsible tourism'. The other global organizations, such as the United Nations Environment Program (UNEP), have also published policies and guides for sustainable tourism development, (UNEP/WTO, 2005) whilst innumerable policy and planning documents at the regional, national and local levels, both public and private sector initiatives, adopt a similar focus. In short, sustainable tourism development has, since the early 1990s, has represented the dominant tourism development discourse in academic, policy/planning and also political circles. The concept of sustainability in the field of tourism demands economic viability, ecological sustainability as well as social equitability. Economic sustainability brings much needed economic prosperity for the host nation in the one hand while its overreliance might cause disruption in tourist sites on the other. In broad sense, a positive economic impact of tourism creates jobs for the host region (Milman and Pizam, 1998), an increased standard of living income redistribution and also improvement in the cost of land and housing (Perdue et al., 1987). Social dimensions necessitate involvement of local communities in tourism related activities. Although, socio-cultural dimensions are qualitative and subjective in nature (Cooper et al., 1998); however, tourism creates opportunity to learn and share the cultural traditions including tourists' indigenous culture. It also leads to improvement of local public services (Keogh, 1990), increased cultural

activity (McCool and Martin, 1994) and the alterations to some aspects of traditional culture (Akis et al., 1996). The focus of environmental dimension is to implement environmental and quality standards agreed by relevant organization for tourism projects and allocation of revenues to prevent degradation of the destination's resources. Yet, unless maintained along sustainability lines, it also potentially threatens natural and built environment as well as degrades local social systems and also culturally authentic lifestyles (Twining-Ward, 2007). In this regard, WTO (2004) aptly added that sustainable tourism should:

- Make optimal use of environmental resources that constitute key element in tourism development maintaining essential ecological process and helping to conserve natural heritage and biodiversity;
- Respect socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values and contribute to inter-cultural understanding and tolerance; and
- Ensure viable, long term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income earning opportunities and social services to host communities, and contributing to poverty alleviation.

The distinguishing feature of mountain tourism is high natural and biological diversity, wilderness, insular culture and subsistence focused ways of life (Jodha, 2009). It is labor intensive in nature than the plains, necessitating a greater number of support staffs (porters, mountain guides, mule owners) to accompany trekking groups or mountaineering expeditions; and to carry supplies up to remote destinations not connected by road or air (Kruk, 2009). The rural and remote areas have long been considered as appropriate locations for tourism to act as a catalyst for major development (Nepal, 2005).

As the mass tourism creep in, a number of such destinations, especially in Indian Himalaya, are facing a threat of extinction. Dax (2002) points out that the fast pace of globalization and mass tourism are threatening mountain communities and the resources they depend on. Worldwide, mountain areas face increasing marginalization, economic decline and environmental degradation. Hence, proper management of mountain resources and socio-economic development of the people requires immediate attention. Against this anthropogenic pressure, sustainable tourism can be a promising vehicle for economic development and poverty reduction, unlocking economic diversification in poor and marginalized rural areas that lack other significant development opportunities (UNWTO 2002; Ashley et al., 2004).

Tourism indicators are information sets which are formally selected for regular use to measure changes in key assets and issues of tourism destinations and sites. WTO (2004) defined it as “measures of the existence or severity of current issues, signals of upcoming situations or problems, measures of risk and potential need for action and means to identify and measure the result of actions”. Accordingly, the development of indicators in the tourism research can be seen as an effort to make sustainable development measurable. Butler (1999) argues that without indicators the term sustainable is ‘meaningless’.

Against this backdrop, our study gives emphasis on three pillars of sustainable tourism, namely, *growth of tourism industry*, *tourism conditions* as well as *community participation in tourism* on the basis of fifteen chosen parameters on

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sustainable tourism. **Table 1** enlists fourteen chosen parameters of which six dealt with growth of tourism; four of them related to tourism conditions and rest four narrate the status of community participation in tourism covering all the four districts of Sikkim.

Table 1. Parameters of enquiry adopted for the study.

Pillars	Sl. No	Indicators/Parameters of Enquiry
I. Growth of Tourism	01	Tourist Inflows- Domestic and Foreign
Industry	02	Tourism Density
A. Trends	03	Tourism's Contribution to NSDP
I. Growth of Tourism	04	Seasonality Pattern
Industry	05	Hotel Bed nights/Occupancy Rate
B. Pattern	06	Tourism Concentration
II. Tourism Conditions	07	Diversity in Tourism Attractions
	08	Accommodation Sector
	09	Transportation
	10	Solid Waste Management
III. Community Participation	11	Tourist-Host Ratio
	12	Employment in the Tourism Sector
	13	Community Participation in Accommodation
	14	Community Participation in Transport

Source: 'Indicators of Sustainable Development for Tourism Destinations- A Guidebook', WTO (2004), Madrid, Spain

ANALYSIS OF TOURISM INDICATORS

In the following section, tourism indicators are studied through fourteen select parameters of enquiry.

Growth of tourist inflows

The growth of tourist inflows in Sikkim is examined through the following table narrating comparative tourist influx in Sikkim and rest of North East during 2008-2014. **Table 2** illustrates proportional domestic and foreign tourist arrivals' in Sikkim and the rest seven North Eastern States' (NESs) during 2008-14. The tiny hilly NES, Sikkim registered higher mean growth rates on both counts than the rest

NESs by 3.96 per cent and 1.21 per cent respectively during seven years. Domestic tourist arrivals’ in Sikkim, accounts for 95/96 per cent of the total arrivals, indicating fluctuating pattern of growth compared to international arrivals during 2008-14.

Table 2. Comparative Tourist Inflow in Sikkim and Rest North East India during 2008-2014.

Year	Domestic				Foreign			
	Sikkim		Rest North East		Sikkim		Rest North East	
	Tourist Inflow	%age Growth	Tourist Inflow	%age Growth	Tourist Inflow	%age Growth	Tourist Inflow	%age Growth
2008	368541	0	4776610	0	19154	0	27601	0
2009	615628	67.05	5156440	7.95	17730	-7.43	29928	8.43
2010	700011	13.71	5466758	6.02	20757	17.07	30193	0.89
2011	552452	-21.08	5791802	5.95	23602	13.71	35318	16.97
2012	558538	1.10	6105395	5.41	26498	12.27	39804	12.7
2013	576749	3.26	6100495	-0.08	31698	19.62	53122	33.46
2014	562418	-2.49	6327499	3.72	49175	55.14	69437	30.71
Mean		8.79		4.83		18.40		17.19

Source: India Tourism Statistics (2008, 2009, 2011, 2012, 2013, 2014), Ministry of Tourism, Govt. of India

TOURISM DENSITY

Tourism density measures tourist arrivals in relation to per square kilo meter area of a destination. Point to point analysis of **Table 3** suggests that average tourism density in Sikkim was 3.71 times of the same in rest NESs during 2001-14. The state hosted tourist influx of 101.57 tourist density indicates its highest influx of 102 tourists per square km during 2010. As the state’s population density is 86 people per square kilo meter as per 2011 census, floating population of 102 tourists creates extra pressure on land and masses of the destination. A sharp fall of tourist arrivals and its density in the subsequent year largely attributable to earth quakes surfaced in Sikkim during 2011. Strikingly, domestic tourists’ (**Table 2**) visiting the state have dwindled during 2011-14 but foreign tourist arrivals’ have gone up by 2.08 times in the same period.

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Table 3. Comparative Tourism Density in Sikkim and Rest NESs' during 2001-2014.

Year	Sikkim			Rest NESs		
	Tourist Inflow	Area in Sq. Km	Tourist Density	Tourist Inflow	Area in square km	Tourist Density
2001	200111	7096	28.20	1532075	255089	6.01
2002	212268	7096	30.03	2591342	255089	10.16
2003	231778	7096	32.66	2895258	255089	11.35
2004	300215	7096	42.31	3099308	255089	12.15
2005	364168	7096	51.32	3181602	255089	12.47
2006	439992	7096	62.00	4055855	255089	15.90
2007	483041	7096	68.07	4288762	255089	16.81
2008	387695	7096	54.64	4804211	255089	18.83
2009	633358	7096	89.26	6145199	255089	24.09
2010	720768	7096	101.57	6153617	255089	24.12
2011	576055	7096	81.18	6396936	255089	25.08
2012	585036	7096	82.45			
2013	608447	7096	85.76			
2014	611593	7096	86.24			
Average			63.98			17.26

Source: India Tourism Statistics (2003, 2005, 2007, 2008, 2009, 2011, 2012, 2013, 2014), Ministry of Tourism, Govt. of India

STRUCTURAL CHANGES IN THE NSDP

Structural changes in the state NSDP (Table 4) during 1996-97 to 2007-08 reveal overwhelming dominance of service sector in terms of its contribution to state economy. Service sector comprises of accommodation, banking, insurance, tourism etc. among others. The average share of this sector to Sikkim's economy pegged at 52.09 per cent during the period of twelve years.

Table 4. Structural Changes in the Composition of Net State Domestic Product (NSDP) of Sikkim during 1996-97 to 2007-08.

Year	NSDP (Rs. Million)	Per Capita (Rs.)	NSDP Agriculture (Rs. Million)	NSDP Industry (Rs. Million)	NSDP Service (Rs. Million)	Percentage Share Tertiary Sector to NSDP
1996-97	5314.8	11332	1782.5	1184.9	2256.2	42.45
1997-98	6117.3	12665	1951.2	1329.7	2737.9	44.76
1998-99	7106.5	14270	1604.1	1426.5	3968.4	55.84
1999-2000	7653.7	14890	1615.2	1461.9	4455.0	58.21
2000-01	8553.2	16077	1815.4	1911.2	4697.5	54.92
2001-02	9563.1	17324	2033.1	2337.1	5051.3	52.82
2002-03	10782.8	19428	2264.2	2808.2	5563.2	51.59
2003-04	12091.0	21476	2552.8	3264.4	6121.1	50.63
2004-05	15106.6	26690	2457.4	4312.1	7960.8	52.70
2005-06	17334.5	30252	2735.0	5030.3	9245.8	53.34
2006-07	18707.5	32199	2883.8	5354.1	10140.0	54.20
2007-08	21394.9	36448	3424.4	6161.9	11478.5	53.65
Average						52.09

Source: North East Vision 2020, Vol. I & II, Ministry for Development of North Eastern Region, 2006, p. 46 & CMIE

SEASONALITY PATTERN

The following figure (**Figure 1**) depicts month wise domestic tourist arrivals in Sikkim during the period of 2005-2015. It reveals the spread of domestic tourist inflow are not evenly distributed, instead, remained concentrated to select few months during the course of eleven years. Month of May preferred by domestic visitors to the state as it recorded maximum tourist inflow followed by April, June, October etc. in descending order. May, April and June together account for 43.4 per cent of the domestic visitors of the state; while months of July, August and September, being the rainy season, considered as lean period for the same as it recorded 13.11 per cent share of visitors during the period.

Figure 2 portrays month wise foreign tourist arrivals in Sikkim during 2005-15. It shows two bimodal peaks in the months of October and April suggesting two preferred months for the foreign visitors to the state. July recorded least tourist arrivals both for domestic and foreign tourists' during the period. Months' of October, November and December together account for 36.02 per cent of the total foreign tourist arrivals. Compared to domestic tourist arrivals (**Figure 1**), foreign tourist influx is well distributed during the course of eleven years.

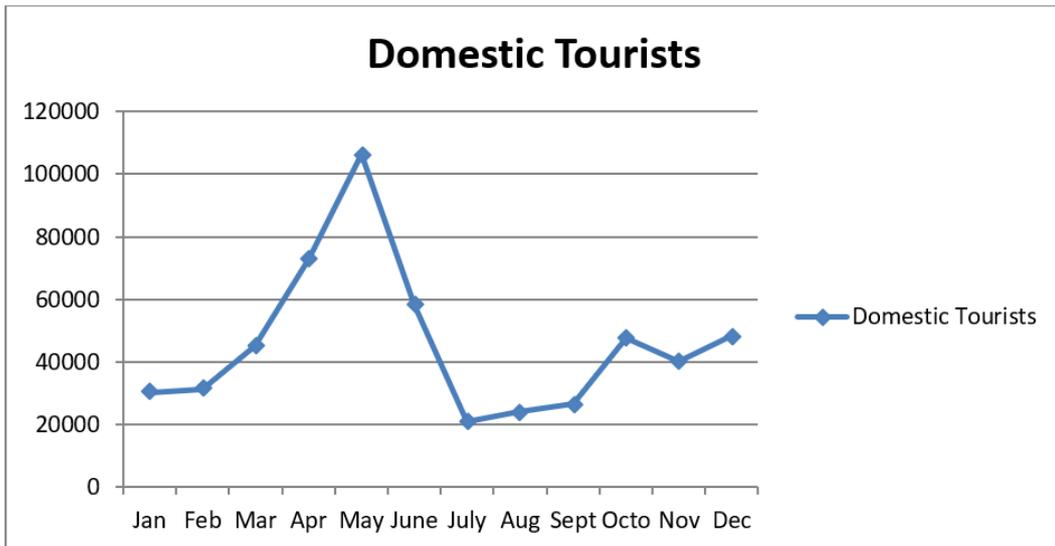


Figure 1. Month wise Average Domestic Tourists’ Influx in Sikkim during 2005-2015.

Source: Department of Tourism, Govt. of Sikkim



Figure 2. Month wise Average Foreign Tourists’ Influx in Sikkim during 2005-2015.

Source: Department of Tourism, Govt. of Sikkim

DISTRIBUTION OF HOTEL BEDS

The **Table 5** shows distribution pattern of hotel beds in Sikkim during 2001-02 to 2009-10. Of the total available hotel beds in Sikkim, East District holds 72.7 per cent of those during 2001-02 followed by West District (18.2 per cent), South District (5.3 per cent) and North District (3.8 per cent) respectively in descending order. In the next phase 2009-10, East District retained its top position (69.1 per cent) in terms of its share in total available hotel beds in followed by West (17.0 per cent), North (9.3 per cent) and South (4.6 per cent) in that order. It can be observed East and West Districts together accounted for around 90 per cent

of the total hotel beds in the state suggesting tourist concentration pattern in the state.

Table 5. Distribution Pattern of Hotels Beds in Sikkim.

Districts	in 2001-02		in 2009-10	
	No. of beds I.	% of total	No. of bed II.	% of total
East Sikkim	5499	72.7	9075	69.1
West Sikkim	1380	18.2	2227	17.0
North Sikkim	288	3.8	1216	9.3
South Sikkim	402	5.3	609	4.6
Total	7569	100.0	13127	100.0

Sources: I. District-wise Average Stay of Domestic and Foreign Tourists’ calculated from the data given in the 20 Years Perspective Plan for Sustainable Development in Sikkim, 2002, p159

II. Tourism Annual Reports 2009-10. Department of Tourism, Govt. of Sikkim, p. 22

OCCUPANCY RATES IN HOTELS

Occupancy rate (OR) index of hotels in Sikkim is calculated on the basis of methodology designed by Jina (1994) to examine available accommodation capacity of destination area. The OR is measured in terms of annual bed capacity (i.e. for 365 days) in relation to total tourists ‘overnights during a particular year. In other words, the index would work out as follows:

$$OR = (\text{Annual Tourist Overnights}) / (\text{Total Bed Capacity} \times 365) \times 100$$

where, Annual Tourist Overnights = Average Tourist Stays X Total Tourists’

The higher the value of the index (OR), greater is the pressure on the accommodation facility and on the corresponding destination.

Table 6. District wise Occupancy Rate of Hotels in Sikkim during 2009-10.

District	No of Tourists’ I			Tourists’ Overnights’ II			No. of Beds X 365 III	Occupancy Rate (%)
	Domestic	Foreign	Total	Domestic	Foreign	Total		
East	449768	13094	462862	2023956	39282	2063238	3312375	62.29
West	96379	2806	99185	289137	8418	297555	812855	36.61
North	32126	935	33061	80315	2338	82653	443840	18.62
South	64252	1871	66123	64253	1871	6613	222285	29.75
Total	642525	18706	661231	2457660	51909	2509569	4791355	

Sources: I. Calculated from Month-wise Tourism Statistics collected from NEDFi Data Bank for Sikkim in 2011

II. District-wise Average Stay of Domestic and Foreign Tourists’ calculated from the data given in the 20 Years Perspective Plan for Sustainable Development in Sikkim, 2002, p159

III. Tourism Annual Reports 2004-05. Department of Tourism, Govt. of Sikkim, p22.

Table 6 illustrates district wise occupancy rate of hotels in Sikkim during

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the year 2009-10. The ORindex for East District was 62.29 per cent; the highest among all districts in Sikkim. The same for West District and South District stands at 36.61 and 29.75 per cent respectively. The North District has registered the lowest OR index during 2009-10.

TOURISM CONCENTRATION: COUNTRIES OF ORIGIN

The major 'countries of origin' of foreign tourists (**Table 7**) suggests dominance of select European countries which boast of 80 per cent of the total foreign tourist arrivals (FTAs) during 1999-2003. The UK, Germany and France together constitute 52.28 per cent of the total FTAs in Sikkim during the period. Representations of FTAs from other continents, with the exception of USA, are negligible during 1999-03.

Table 7. Top Ten Major Countries of Origin of Foreign Tourists: 1999-2003.

Countries/ Year	1999	2000	2001	2002	2003	Average
UK	1120	1197	710	1127	999	1030.6
Germany	1366	1191	888	770	685	980.0
French	862	1055	873	1041	699	906.0
USA	933	39	1020	860	NA	713.0
Australia	638	527	505	491	346	501.4
Japan	490	462	331	391	331	401.0
Italy	342	269	274	273	340	299.6
Israel	218	240	234	241	335	253.6
Netherland	96	310	201	365	260	246.8
Switzerland	228	299	181	365	260	246.8

Source: Sikkim: A Statistical Profile 2004-05, p. 123

The FTAs from UK, Germany and France during 2005-07 (**Table 8**) came down to 47.68 per cent in the next phase, however, these three countries together accounts for highest number of FTAs in both the periods. FTAs from USA jumped up to second spot during the course of three years'. It can be observed that FTAs from the top ten originating countries almost remained samewith the exception of Thailand and Canada during 2005-07.

TOURISM CONCENTRATION: STATES' OF ORIGIN

Domestic tourist influx in Sikkim is primarily dependent on neighboring state West Bengal as it recorded 45 and 55.8 per cent of the total domestic tourist arrivals in the state during 2009 and 2012 (Table 9). Ironically, the number of rests of the states of origin visitors in 2009 have gone down in percentage terms during 2012.

Table 8. Top Ten Major Countries of Origin of Foreign Tourists: 2005-07.

Country	No of Tourist Arrivals in 2005	No of Tourist Arrivals in 2006	No of Tourist Arrivals in 2007	Average Tourist Arrivals per Country
UK	2348	2417	2411	2392
USA	2024	2310	2316	2217
Germany	1677	1631	1563	1624
France	1637	1573	1452	1554
Australia	1074	1085	878	1012
Thailand	445	648	707	600
Netherland	181	481	667	443
Canada	478	563	630	557
Japan	626	890	608	708
Italy	536	NA	613	575

Source: Sikkim: A Statistical Profile 2008-09, p. 135

Table 9. Top Domestic Tourists Generating Markets for Sikkim during 2009 and 2012.

2009 i		2012 ii	
Source	%age	Source	%age
West Bengal	45	West Bengal	55.8
Delhi	15	Sikkim	12.2
Maharashtra	10	Delhi	7.4
Andhra Pradesh	8	Assam	5.1
Karnataka	7		
Gujarat	5		
Tamil Nadu	5		

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Others	5	UP	4.5
		Bihar	3.8
		Maharashtra	3.5
		Arunachal Pradesh	3.3
		Gujarat	
		Others	2.9
			1.5

Source: i. File Papers, Department of Tourism, Govt. of Sikkim, 2009
ii. Tourism Survey Report for the State of Sikkim (June 2011-May 2012), Ministry of Tourism, Govt. of India

TOURISM CONCENTRATION: DISTRICT WISE

As per Tourism Department communiqué in 2010, 70 per cent of the tourists visiting the state flocked to East District of Sikkim while West District accounts for 15 per cent of the rest. The South and North Districts are toured by 10 and 5 per cent of the remaining visitors respectively. As per this estimates, East and West Districts together entertains 85 per cent of the tourists visiting the state.

DIVERSITY OF ATTRACTIONS

Sikkim's tourism offerings include natural, cultural and adventure attractions. Natural Attractions: Sikkim is endowed with natural attractions since its inception. Such attractions include national parks, wildlife sanctuaries, biosphere reserves, high altitude lakes, rivers, waterfalls, mountain peaks, mountain passes, hot springs and scenic views among others.

Cultural Attractions: Cultural attraction establishes relationship between hosts and guests in a tourism destination. These are offered in the form of arranging cultural festivals, dance, drama's organized by local communities to showcase their ethnic culture by native Lepcha, Bhutia and Nepalese.

Adventure Attractions: In Sikkim, packages are offered for adventure tourism which includes trekking, river rafting, nature trails, mountain biking, mountaineering expeditions among others. Trekking packages are the most popular; especially the Yuksam-Dzongri trek trail, is the only trek trail in the state for which route permits are made available to the foreigners.

ACCOMMODATION SECTOR

Accommodation sector comprises number of hotels, beds and rooms available to tourists. East district records (**Table 10**) the largest share of number of hotels, rooms and beds during the period of 2001-02 to 2009-10. This follows West, North and South districts in descending order.

TRANSPORT

The following **Table 11** enlists the number of registered passenger transport vehicles in Sikkim at the end of 31st March, 2007 and 2009. The bus comprised of stage carriages, contract carriages, private sector vehicles and other buses. The taxis consist of motor cabs, maxi cabs and other taxis.

Table 10. District-wise Number of Hotels in Sikkim during 2001-02 to 2009-10.

District/ Towns	2001-02*		2008-09@			2009-10#		
	No of Hotels	No of Beds	No of Hotels	No of Rooms	No of Beds	No of Hotels	No of Rooms	No of Beds
East District	158	5499	354	4526	9362	418	4378	9075
West District	75	138	132	1353	NA	132	1113	2227
North District	29	288	87	608	NA	87	608	1216
South District	23	402	40	224	609	40	324	609
Total	285	6051	613	6711	9971	677	6423	13127

Source: *20 Years Perspective Plan for Sustainable Tourism Development in Sikkim, Ministry of Tourism, Government of India, 2002, p235

@ Annual Report 2008-09, Department of Tourism, Govt. of Sikkim, p27

#Annual Report 2009-10, Department of Tourism, Govt. of Sikkim, p31

Table 11. Calculation of Vehicles per square kilo meter area of Sikkim as on 31st March, 2007 and 2009.

States	2006-07		2008-09		% Growth Over 2006-07	Area Sq. Km	Vehicle per Sq. Km Area 2006-07	Vehicle Per Sq. Km Area 2008-09
	Buses	Taxis	Buses	Taxis				
Sikkim	429	6499	294	7108	6.84	7096	0.98	1.04
NE Average							0.41	0.45

Source: Road Transport Year Book 2007-09, Vol. I, 2011, Ministry of Road Transport and Highways, Govt. of India, p14-16. NE stands for North East India

Sikkim recorded 0.98 and 1.04 vehicle per square kilo metre during the period of 2006-07 and 2008-09, which is higher than North East average for the same. During 2009-10, Sikkim has registered 880 contract/stage carriers and 41 luxury tourist vehicles to facilitate traffic volume in the State (GoS, 2012). Hence, it, thus, enhances vehicle per square kilo metre area to 1.17 till 2009-10.

SOLID WASTE MANAGEMENT

Sikkim generates 0.45 per capita of solid waste per day amounts to 8.75 kgs per square kilo meter area of the State. The total quantity of municipal solid waste generated is about 42 tonnes per day (0.27 per cent) and the problem is mainly in urban areas (GoI, 2008). **Table 12** reveals the quantum of municipal solid waste generation per cent per kg per day in Gangtok (i.e. 0.44) is higher than the North East average during 2004-05. The actual figure might be quite higher than whatever mentioned above. A compost plant at Martam is designed to handle waste amounting to 50 metric tonne per day which covers entire organic waste generated at Gangtok and the neighboring areas. However, the landfill area which is designed to for 15 to 20 years may not last that long. Hence, the principle of 3R and waste segregation are mandatory for effective treatment of waste in the city (GoS, 2007).

Table 12. Waste generation rate in Sikkim during 2004-05.

NE States	Waste Generation Rate (%) Kg/Day)	NE Cities	Characteristics (%)		
			Compostable	Recyclable	Moisture
Sikkim	0.44	Gangtok	46.52	16.48	44.00
NE Average	0.29		55.62	19.18	53.63

Source: Management of Municipal Solid Waste, Central Pollution Control Board (CPCB), Ministry of Environment and Forest, Govt. of India, Delhi, 2007, p5-7. NE stands for North East India

TOURIST-HOST RATIO

The tourist host (TH) ratio of Sikkim during the period of 2005-2010 for five peak months' representing about 60 per cent of total tourist influx in the State during the period. With exception of October and November, 2009, every successive period registered higher rate of growth of TH ratio during 2005-10. The TH ratio is highest for the month of May throughout the period followed by April, October, March and November in descending order. The overall TH ratio for these five months was 10.43 per cent which are measured to be quite high considering the fragility of the landscape and its impact upon related infrastructure.

Table 13. Calculation of Tourist- Host (TH) Ratio of Sikkim during 2005-2010.

Year	Projected Population @	May	April	March	October	November
		TH Ratio (%)				
2005	569000	12.67	8.07	4.99	6.76	6.29
2006	576000	14.15	11.15	7.57	7.43	6.61
2007	583000	15.01	12.53	8.52	7.96	6.98
2008	591000	17.17	13.36	9.04	8.94	7.76
2009	598000	18.21	14.75	9.72	7.99	7.71
2010	605000	19.54	14.91	10.44	10.31	8.46
Mean		16.13	12.46	8.05	8.23	7.3

Source: @Projected Population by Sex as on 31st March, 2001-2026 India, States' and Union Territories. www.censusindia.gov.in, accessed on 12 September, 2012.

Tourist Host ratio is arrived at from the data collected from Annual Report 2010-11, Directorate of Economics, Statistics, Monitoring and Evaluation, Govt. of Sikkim, p 127

EMPLOYMENT IN THE TOURISM SECTOR

The **Table 14** shows projected growth of direct tourism employment in the State for 2002-2010. Perspective plan suggests that 15 per cent annual addition to the tourism employment with spurt in tourist arrivals' in the state. The domestic tourists, being largest segment, created more employment opportunities than the foreign tourists during 2002-2010. The total employment calculated as 21616 persons in 2010. However, it does not include the induced employment generated from tourism.

Table 14. Projected Growth of Tourism Employment in Sikkim 2002-2010.

Year	Domestic Tourists' (Nos)	Foreign Tourists' (Nos)	Total (Nos)
2002	6234	591	6825
2003	7200	683	7883
2004	8316	789	9105
2005	9605	911	10516
2006	11094	1053	12146
2007	12813	1216	14029
2008	14799	1404	16204
2009	17093	1622	18715
2010	19743	1873	21616

Source: Govt. of India, 20 years Perspective Plan for Sustainable Development of Tourism in Sikkim 2002, Ministry of Tourism, p267

COMMUNITY PARTICIPATION IN ACCOMMODATION

As a part of promoting community-based tourism, home stays are developed across Sikkim through local initiatives. **Table 15** shows district wise growth of home stays throughout the state till 2008. These home stays provide revenues rural populace in the one hand and also facilitates dispersal of tourists' from already congested urban centres on the other. Altogether, 115 home stays were in operation till 2008, of which only 12 of them were situated in congested East District. The rest were distributed in the three districts of Sikkim.

COMMUNITY PARTICIPATION IN THE TRANSPORT

The community participation tourism is assessed from the growth of taxis and luxury stage carriers catering to the tourism services. Every motor caps and taxis employ at least two persons including the driver. The cleaners support staff and the owner of vehicles increases the number of involvements in this category. An account of which is given in **Table 16**.

Table 16 depicts the growth of registered taxis in Sikkim during 2006-10. The taxis comprised of motor caps and maxi caps registered gradual positive increase during the course of five years. The overall growth of taxis was 19.15 per cent in 2006 gone up to 22 per cent in 2010, recording 23.38 per cent increase in 2010 over the number of caps in 2006.

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Table 15. District wise spread of home-stays in Sikkim.

District	Location	No of Households (approx)	Capacity (No of Persons) approx
East	Pastenga-Assam	12	35
	Lingzey		
West	Yuksam	12	40
	HeeBermiok	4	20
North	Lachen	8	12
	Dzongu	8	40
South	Maniram	6	15
	Kewzing	15	30
Other Areas	All Sikkim	50	200
Total		115	392

Source: 'Prefeasibility Study for Construction of Skywalk at Bhaleydhunga, Sikkim', Final Report, Department of Tourism, Govt. of Sikkim, 2008, pp: 112

Table 16. Growth of registered taxis in Sikkim during 2006-2010.

Year	Taxis				Total (Number)	Increase (%)
	Motor Caps# (Number)	Increase (%)	Maxi Caps* (Number)	Increase (%)		
2006	2770#	---	3282#	--	6052#	--
2007	2997#	8.20	3502#	6.70	6499#	19.15
2008	3216#	7.31	3592#	2.57	6745#	19.87
2009	3507#	9.05	3601#	0.25	7170#	21.15
2010	3687*	4.86	3780*	4.97	7467*	22.00
Mean		7.36		14.49		20.54

Source: #Road Transport Yearbook 2007-09, Ministry of Road Transport and Highway, Govt. of India, 2011, p 54

**Annual Report 2011-12, Motor Vehicle Division, Transport Department, Govt. of Sikkim, 2012, p 43*

CONCLUSION

In spite of being blessed with tourism offerings, the state failed to rein in unplanned growth of tourism infrastructure and also replacing traditional houses with concrete structures across fragile terrains questions the sustainability of

tourism itself. As tourism is a bread-butter industry for Sikkim and every development activity center on it, local community centric tourism development is *sine qua non* of promoting sustainable tourism. Although all stakeholders are involved in tourism planning and implementation process through community organizations; however, with the exception of West District, locales are overlooked in the decision-making process.

There is an urgent need to shift the burden of floating population from East district to other lesser known destination inside Sikkim. Although, steps are taken to disperse the tourists to other three districts, but there is no regulation to divert tourists from congested urban centers for its even distribution. In this regard, “High Value Low Impact”, practiced by Bhutan, can be adopted for select tourism sites especially during pick tourist season.

Majority of the domestic tourists traveled the state for leisure activity having no regard for sustainability of tourism sites. Tourism Department of the state are playing its part in educating such tourists about adverse consequences of unsustainable practices, however, rate of waste generation across the state suggest more efforts called for from all stakeholders to make the destination sustainable. State Tourism Policy 2016 overtly accepted the models for promoting sustainable mountain tourism, a planned approach towards it can avert any catastrophe like earth quakes surfaced in Sikkim in 2011.

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